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1339-CA (P192 C1)

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NO. PATENT
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Remarks/ Arguments

In response to the Office Action mailed February 23, 2004, Applicants respectfully request that the Examiner reconsider the rejections of the claims in view of the amendments set forth above and the following remarks..

Claims 16-17, and 28-35 remain.

Claims 16, 28, 33 and 34 are being amended.

Claims 36 and 37 are being added.

Claims 33-34 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Applicants have amended Claim 34 to replace the term "third capacitor" with the term "another sampling capacitor".

Claims 16-17, and 28-35 stand rejected under 35 U.S.C. § 102(e) as being anticipated by *Fujimori* (U.S. Patent 5,790,064) (hereinafter "the *Fujimori* reference"). Applicants respectfully traverse these rejections on the following grounds.

Anticipation rejections under 35 U.S.C. § 102(e) require identity of invention. In other words, each and every feature of each and every claim rejected as anticipated must be disclosed in a single prior art reference. Applicants respectfully submit that the anticipation rejections of Claims 16-17, and 33-34, in view of the *Fujimori* reference, should be withdrawn in light of the amendments set forth above.

Independent Claims 16, 28, and 33, as amended, include the feature of an integration operation in which charge from a plurality of capacitors is first transferred to a common node during a first period and subsequently transferred from the common node to an integration capacitor at the corresponding amplifier input summing node during a following second period of the integration operation. Advantageously, the charges being transferred from the plurality of capacitors are allowed to settle at the common mode before being transferred to the integration capacitor, providing a more accurate integration operation.

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Th *Fujimori* reference teaches away from the invention of amended Claims 16, 28, and 33. Specifically, in the system disclosed in the *Fujimori* reference, the ordering of the operations during the integration phase is reversed from that claimed. Specifically, during sampling sub-phases $\phi 1$ and $\phi 1D$, the input sampling capacitors C_s sample the input voltage V_{in} and the reference sampling capacitors C_{rp} sample the reference voltage V_{ref} . During integration, as shown in Figure 6 of the *Fujimori* reference, the amplifier input summing nodes are first coupled to all of the sampling capacitors C_s , C_{rn} , and C_{rp} during sub-phase $\phi 2$. Only after sampling capacitors C_s , C_{rn} , and C_{rp} are all coupled to the amplifier summing nodes, are the sampled charges transferred during integration sub-phase $\phi 2D$. Disadvantageously, since all the charges on the sampling capacitors are dumped at once to the amplifier input summing nodes, voltage disturbances result, causing a less accurate integration operation.

In sum, according to the principles of the present invention, during the integration phase, charge is first transferred from the input and reference capacitors to the common nodes and then the common nodes are coupled to the integration capacitors. In almost exactly the reverse order, in the *Fujimori* reference, the capacitors are first coupled to the integration capacitors and then all the charges are transferred.

Given the substantial differences between Claims 16-17, and 28-35 and the teachings of the *Fujimori* reference, Applicants respectfully submit that the rejections of Claims 16-17, and 28-35 should be withdrawn.

Claims 36 and 37 have been added to more particularly point and distinctly claim the subject matter Applicants believe is inventive.

No new matter has been added; the claims have been merely amended to more particularly claim the subject matter Applicants believe is inventive.

Applicants respectfully submit that the Claims as they now stand are patentably distinct over the art cited during the prosecution thereof.

Applicant respectfully requests a Second Month Extension of Time to File this Response. Enclosed with this report is Form PTO/SB/22 with Extension Fees in the amount of \$420.00 as reflected on the PTO/SB/17 Fee Transmittal.

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Also, the Commissioner is hereby authorized to charge any other fees or credit any overpayment to Deposit Account Number 20-0821.

If the Examiner has any questions or comments concerning this paper or the present application in general, the Examiner is invited to call the undersigned at (214) 969-1749.

Respectfully submitted,
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Date: July 2, 2004

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